

US 29 Corridor Planning Study Planning Board Meeting

Montgomery County **RAPID TRANSIT**

US 29

February 16, 2017



Maryland Department
of Transportation

MC DOT
Montgomery County Department of Transportation

Conceptual Alternatives

■ **Alternative A:**

- Intermittent Curbside Business Access Transit Lanes (BAT)* in South
- Median Shoulder BRT Lanes in North

■ **Alternative B:**

- Intermittent Curbside Managed Lanes (HOV2+/BAT)** in South
- Bus on Outside Shoulder in North

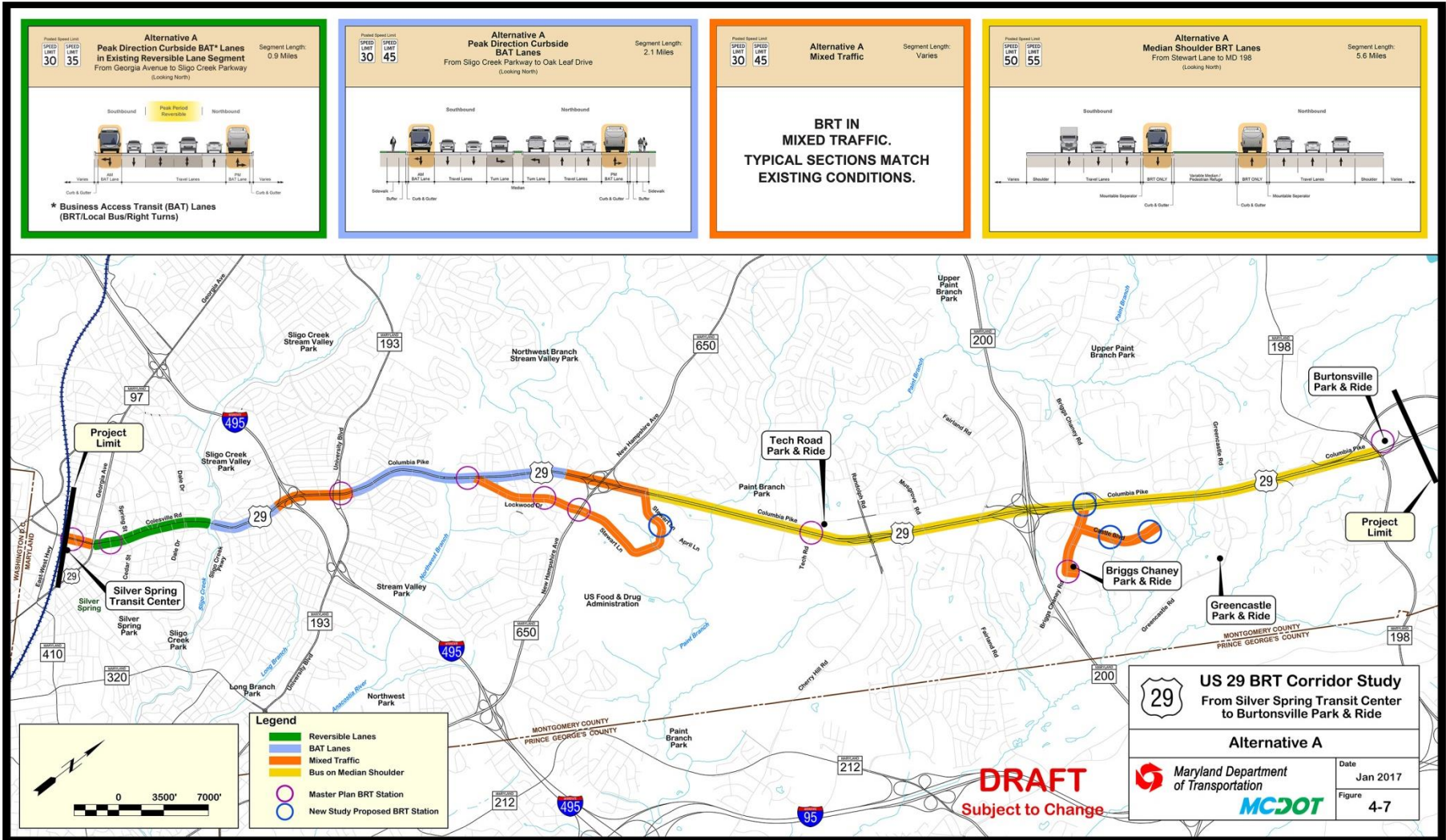
• **Alternative B Modified:**

- Intermittent Curbside Managed Lanes (HOV2+/BAT)** in South
- Median Shoulder BRT Lanes in North

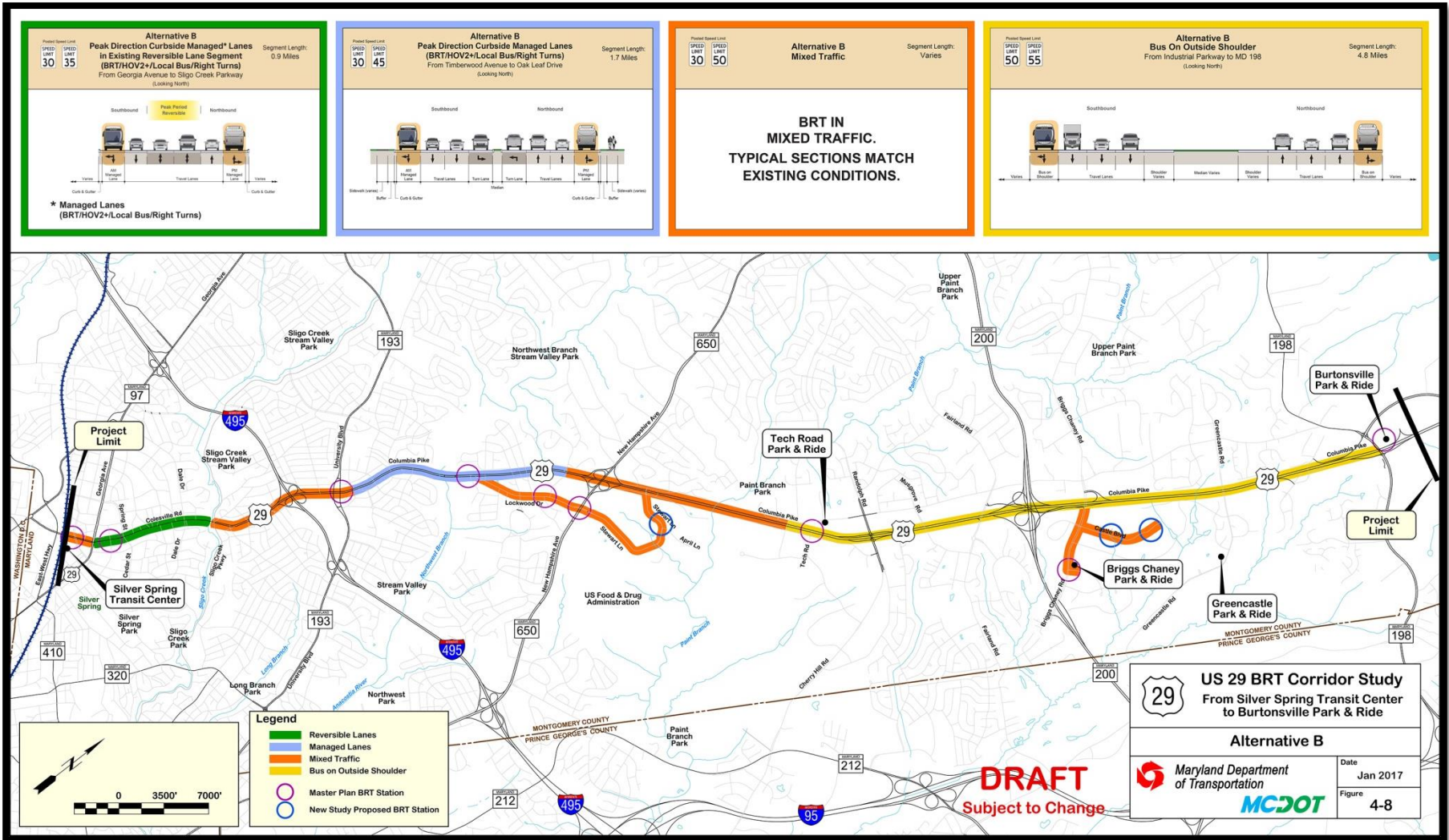
***BAT Lane = BRT buses, local buses, right turning traffic**

****HOV2+/BAT Lane = Vehicles with 2 or more persons, BRT buses, local buses, right turning traffic**

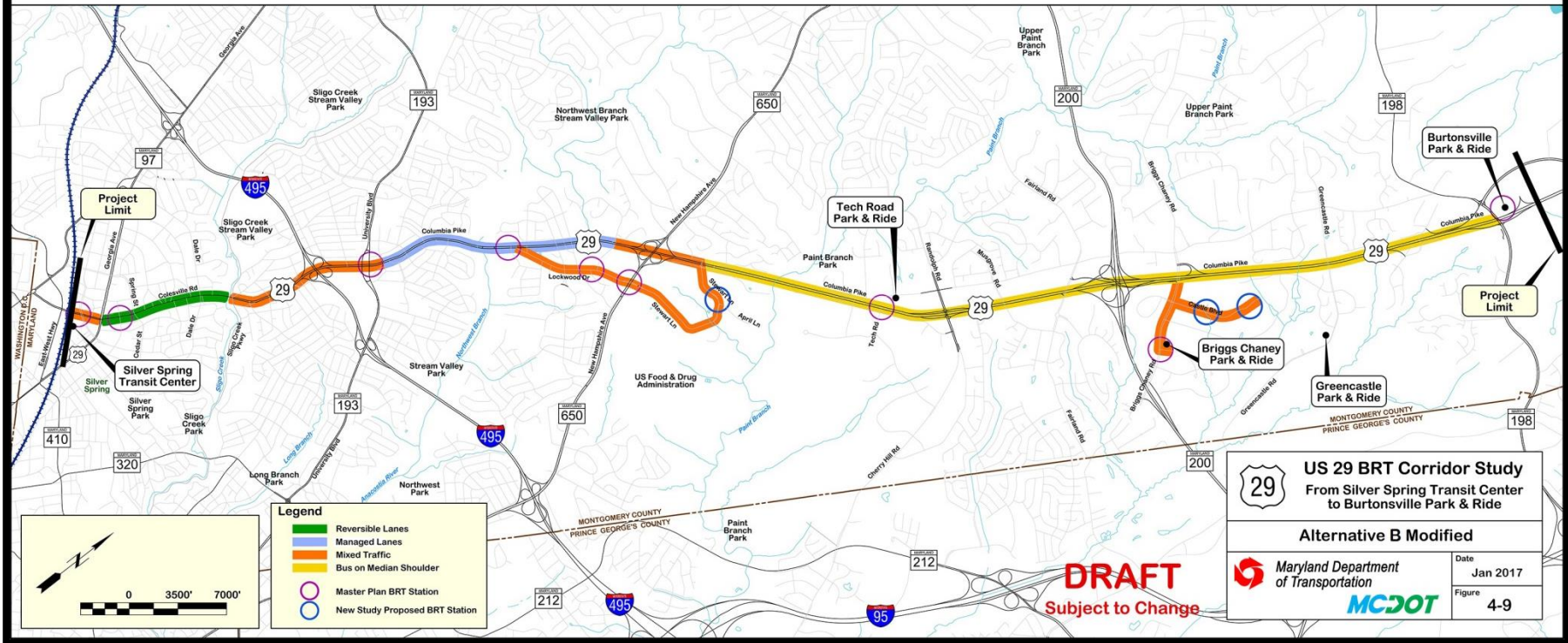
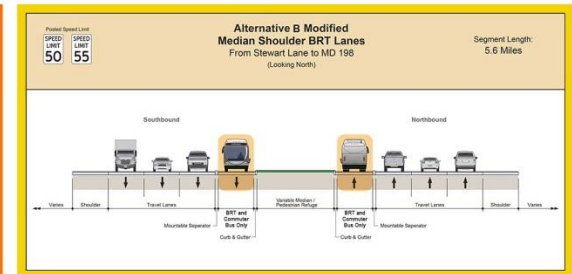
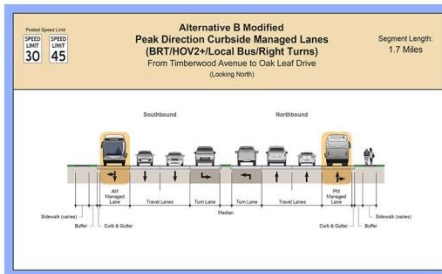
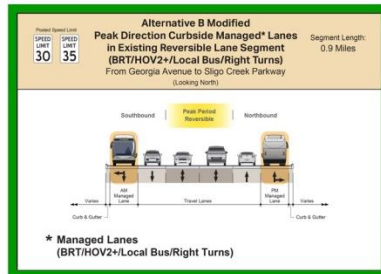
Alternative A



Alternative B

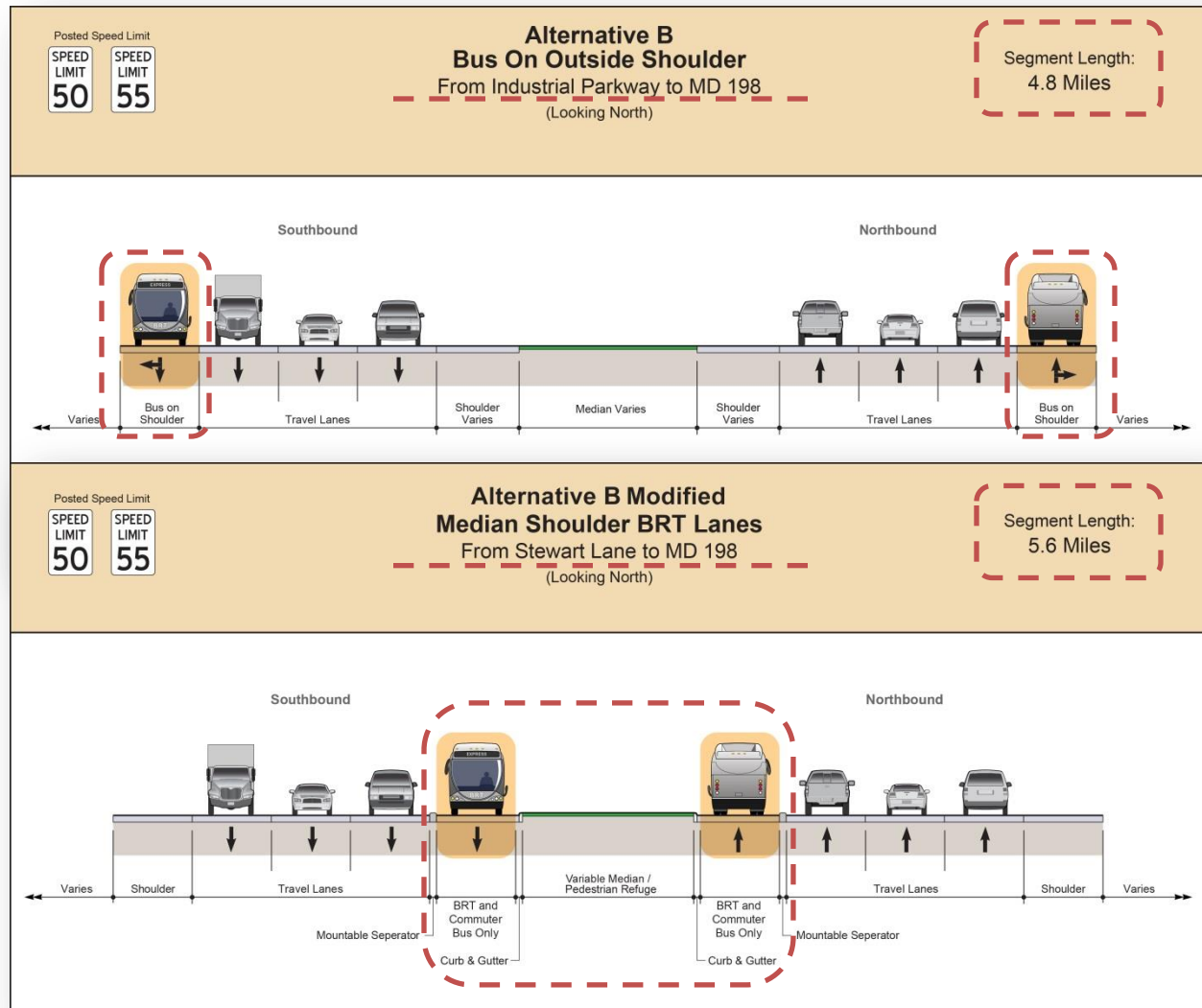


Alternative B Modified



Alternative B and B Modified

A
Comparison
of Subtle
Differences



2040 Total Daily Boardings and Travel Demand

Total Daily Transit Boardings				Total Daily BRT Boardings			
No-Build	Alt A	Alt B	Alt B Mod	No-Build	Alt A	Alt B	Alt B Mod
28,500	34,900	33,700	34,400	-	18,100	16,400	17,300

- **Transit:** Total daily transit boardings increase between 18 percent and 22 percent over No-Build conditions.
- Vehicle Miles Traveled are reduced under all three conceptual build alternatives.
- Person Miles Traveled are increased under all three conceptual build alternatives.
- **Vehicles:** A 60 percent or greater increase in HOVs and a decrease in SOVs are projected during the peak hours with Alternatives B and B Modified.

2040 Estimated Project Costs

	Right-of-Way (\$M)	Bus Procurement (\$M)	Construction (\$M)	Annual Operating (\$M)
Alternative A	\$2 to \$3	\$21	\$80 to \$112	\$9 to \$10
Alternative B	\$2 to \$5	\$17	\$60 to \$108	\$8 to \$9
Alternative B Modified	\$2 to \$3	\$19	\$77 to \$106	\$9 to \$10

- Costs are approximate and based on 2015/2016 dollars.
- Right-of-Way costs in Alternative B are higher due to additional storm water management costs.
- Forecasted ridership levels for Alternative B indicate that fewer buses and reduced operating times are required; therefore, operations costs are lower compared to Alternatives A and B Modified.

2040 Traffic Operations Performance Measures

The traffic operations analysis covered the following key performance measures, among others:

- Corridor Travel Time
- Person Throughput at Select Locations
- Miles of Level of Service (LOS) at 'E' or 'F'
- Intersections Operating at LOS 'E' or 'F'

2040 Corridor Travel Time

- Mixed results between the build alternatives and No Build; Alternative A had the slowest travel times.
- Alternative A had the slowest AM Peak travel time for cars and trucks as well as for BRT, even slower than No Build.
- Alternative B and Alternative B Modified offered the fastest BRT and local bus AM peak travel times; B Modified had the fastest PM time for buses.
- Alternative B and Alternative B Modified offered the fastest HOV PM peak travel times.
- AM Weighted Person Travel Time was fastest with No Build; slowest with Alternative A.

2040 Person Throughput

- AM person throughput is higher with Alternatives B and B Modified than for Alternative A or the No Build
- PM person throughput is higher for No Build at southern end of corridor than for the other alternatives
- PM person throughput is higher for all three build alternatives at the north end of corridor than the No Build

2040 Traffic Performance

- Alternative B Modified improvements to LOS in the PM Peak may be attributed to fewer vehicles accessing the corridor in the north.
- Latent demand for the three build alternatives increases due to fewer vehicles accessing the network.

2040 Traffic Analysis Results Overview

Overall the analysis shows the following:

- Improved Transit Travel Time
- Improved Person Throughput
- Potential Increase in Delays for Cars and Trucks
- Potential Increase in Latent Demand

Additional analysis to improve traffic performance:

- Adjustments to the Limits and Transitions of the BAT lane or Managed lane
- Operating the BRT in Mixed-traffic
- Alternative Bus Routings
- Roadway Capacity Improvements

Questions?

